

WHAT IS CLAIMED IS:

1. A light intensity distribution measuring
apparatus for measuring a light intensity distribution
5 in light with a wavelength of 20 nm or smaller emitted
from a light source, said light intensity distribution
measuring apparatus comprising plural light intensity
detector units each including a mirror and a
photoelectric conversion element, said light intensity
10 distribution measuring apparatus measuring the light
intensity distribution so that an incident angle of the
light incident upon the mirror is a predetermined angle.

2. A light intensity distribution measuring
15 apparatus according to claim 1, wherein the
photoelectric conversion element measures the light
intensity in a range where a solid angle viewed from
the light intensity detector unit to a condensed point
of the light is below 0.024 steradians.

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3. A light intensity distribution measuring
apparatus according to claim 1, wherein the light
source condenses the light emitted at an emission point
and diverges the light at a predetermined divergent
25 angle, and the light intensity detector unit is
arranged on a spherical surface that has a center at a
condensed point.

4. A light intensity distribution measuring apparatus according to claim 1, wherein the light intensity detector unit is arranged on a plane arranged in the light.

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5. A light intensity distribution measuring apparatus according to claim 3, wherein a surface on which the light intensity detector unit is arranged is rotatable around an optical axis of the light.

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6. A light intensity distribution measuring apparatus according to claim 1, wherein the incident angle of the light upon the mirror is 20° or smaller in the light intensity distribution detector unit.

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7. A light intensity distribution measuring apparatus according to claim 1, wherein the incident angle of the light upon the mirror is approximately equal to a Brewster angle for the light in the light intensity distribution detector unit.

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8. A light intensity distribution measuring apparatus according to claim 1, wherein the light intensity distribution detector unit has plural mirrors and photoelectric conversion elements corresponding to the respective mirrors, the light incident upon the plural mirrors plural surfaces is orthogonal to plural

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surfaces that has light reflected by each of the plural mirrors, and the incident angle of the light upon the mirror is approximately equal to a Brewster angle for the light.

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9. A light intensity distribution measuring apparatus according to claim 7, wherein the light intensity distribution detector unit is rotatable by approximately 90° while maintaining the incident angle of the EUV light upon the mirror.

10. A light intensity distribution measuring method that uses a light intensity distribution measuring apparatus for measuring a light intensity distribution of light with a wavelength of 20 nm or smaller emitted from a light source, said light intensity distribution measuring apparatus comprising plural light intensity detector units each including a mirror and a photoelectric conversion element, said light intensity distribution measuring apparatus measuring the light intensity distribution so that an incident angle of the light incident upon the mirror is a predetermined angle.

11. A light intensity distribution measuring method for measuring a light intensity distribution of light with a wavelength of 20 nm or smaller emitted

from a light source, said light intensity distribution measuring method using a light intensity detector unit that includes a mirror and a photoelectric conversion element which are arranged so that an incident angle of the light upon the mirror is approximately equal to a Brewster angle for the light, and said light intensity distribution measuring method measuring the light intensity of the light reflected by the mirror, which light has different directions of polarization by approximately 90° at approximately the same position in the light.

12. A light intensity distribution measuring method according to claim 11, comprising the step of repetitively measuring the light at different measurement positions in the light.